REMARKS

This application has been reviewed in light of the Office Action dated September 22, 2006. Claims 12-19 are the only claims presented for examination. Claims 12, 16 and 17 are in independent form. Claims 12, 13, 16 and 17 have been amended to clarify still further what Applicant regards as his invention. Claims 18 and 19 have been added to assure Applicants of a full measure of protection of the scope to which they deem themselves entitled. Favorable reconsideration is requested.

In the outstanding Office Action, Claims 12, 16 and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,185,661 (Ng). In addition, Claim 13 was rejected under 35 U.S.C. § 103(a) as being obvious from *Ng* in view of U.S. Patent 6,058,207 (Tuijn et al.), and Claims 14 and 15, as being obvious from *Ng* in view of the cited Berns publication.

Independent Claim 12 is directed to an image processing method which maps a first color gamut into a second color gamut, comprising the following steps: First sample points are set on a surface of the first color gamut, and second sample points are set in the first color gamut. There are obtained third sample points corresponding to the first sample points, and fourth sample points corresponding to the second sample points, where the third sample points and the fourth sample points are in the second color gamut. Surface gradation lines are set based on the first sample points and internal gradation lines based on the second sample points, and mapping is performed. The surface gradation lines are mapped, based on the third sample points, and the internal gradation lines, based on the fourth sample points, and an input color is mapped into an output color in the second color gamut by using the mapped surface gradation lines and the mapped internal gradation lines.

In this process, the surface gradation lines and the internal gradation lines each indicate a locus of color change in the first color gamut, and the mapped surface gradation lines and the mapped internal gradation lines each indicate a locus of color change in the second color gamut. Moreover, according to Claim 12, the step of mapping the input color into the output color in the second gamut includes calculating the output color from the mapped surface gradation lines and the mapped internal gradation lines, based on a physical relationship of the input color, the surface gradation lines and the internal gradation lines.

It should be noted that, in the method of Claim 12, the surface gradation lines and the internal gradation lines indicate a locus of color change in the first color gamut, and the mapped surface gradation lines and the mapped internal gradation lines indicate a locus of color change in the second color gamut.

Further, the changes made to the independent claims are intended to clarify the content of the processing in the mapping step ("said mapping step includes calculating the output color from the mapped surface gradation lines and the mapped internal gradation lines, based on a physical relationship of the input color, the surface gradation lines and the internal gradation lines").

Ng has been adequately discussed in previous papers, and it is not deemed necessary to repeat that discussion in full. Applicants particularly wish to point out to the Examiner that the graph shown in Fig. 7 of *Ng* indicates the correspondence (relation) between the before-conversion state and the after-conversion state. This graph is plainly different from the processing recited in Claim 12, in at least the following points:

the graph in *Ng* does <u>not</u> have the before-conversion gradation curve in the first

color gamut and the after-conversion (after-mapping) gradation curve in the second color

gamut; and

the graph in *Ng* does <u>not</u> have the surface gradation line and the internal gradation

line, as recited in Claim 12.

Consequently, it is apparent that this portion of *Ng* does not disclose a

mapping step that "includes calculating the output color from the mapped surface gradation

lines and the mapped internal gradation lines, based on a physical relationship of the input

color, the surface gradation lines and the internal gradation lines", as recited in Claim 12.

In the method of Claim 12, two discrete factors "before mapping" and "after

mapping" are provided, and two discrete factors "surface" and "internal" are further

provided. By virtue of these factors, it is possible in the method of Claim 12 to achieve

that the surface and internal color changes in the first (before-mapping) color gamut are

preserved in the second (after-mapping) color gamut.

This is a remarkable effect provided by Applicants' method, and one that

cannot be obtained from the conventional mapping operation, including in particular from

that of *Ng*. In this regard, Applicants note that using the *Ng* approach, continuous mapping

of the gradation can be achieved in each hue, but that this operation, as performed in *Ng*

(and unlike the method of Claim 12), cannot exclude the possibility of an inconsistency or

discontinuity occurring between adjacent hues.

In Figs. 9A and 9B of *Ng*, elements 16, 18, 20 and 22 are what converts

input RGB into L*a*b*, element 32 is what performs color adjustment according to a

user's instructions, and element 36 is what converts L*a*b* into CMYK. Applicants

respectfully point out that these elements are not provided for the purpose of a gamut

mapping process. Rather, in *Ng*, the means provided for performing gamut mapping is

element 34, and the details of the gamut mapping are set out in Figs. 6 to 8. (However, for

the reasons described above, the gamut mapping in *Ng* is not relevant to, and does not

teach or hint at, the above-quoted processing recited in Claim 12.) It appears to

Applicants, therefore, that rejecting Claim 12 on the theory that elements 16, 18, 20, 22, 32

and 36 of *Ng* do what is recited in Claim 12 depends entirely on an improper hindsight

reconstruction of the prior art.

In this regard, Applicants also wish to point out that the present application

itself discloses, as background technology over which the present invention is an

improvement, a technique for performing the linear mapping in the lightness-chroma

dimension for each hue in the uniform color system (see page 3, lines 9-16). It should be

noted that this background technology is quite similar to that of *Ng*.

Accordingly, it is believed that the present invention as recited in

independent Claim 12 is not disclosed in, nor even fairly hinted at, in *Ng*, and that Claim

12 therefore should be deemed allowable over that patent.

A review of the other art of record, including *Tuijn*, has failed to reveal

anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed

above, as a reference against the independent claims herein. Those claims are therefore

believed patentable over the art of record.

The other claims in this application are each dependent from Claim 12, and

also are believed to be clearly patentable for the reasons discussed above. Nevertheless,

because each dependent claims recites an additional aspect of the invention, the

independent consideration or reconsideration, as the case may be, of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and allowance of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

/Leonard P Diana/
Leonard P. Diana
Attorney for Applicant
Registration No. 29,296

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200